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## GOLF SHOES

### BACKGROUND OF THE INVENTION

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**[0001]** This invention relates to golf shoes with which a correct swing is possible.

**[0002]** Fig. 2A shows a position of a golfer 20 in the address position before making a swing, and Fig. 2B shows a state of the feet (shoes) as seen from the front. Further, Fig. 3 shows a golfer in backswing, Fig. 4A shows a golfer who is preparing a downswing, and Fig. 5A shows a state immediately before impact. Also, Figs. 4B and 5B are similar to Fig. 2B but schematically show the relation between the feet and the ground at the time of Figs. 4A and 5A, respectively. These figures show a right-handed golfer, and the following description is also for a right-handed golfer.

**[0003]** In an address position, as shown in Figs. 2A and 2B, a golfer 20 has his thighs slightly bent inwardly without stretching the knees 12L, 12R for both right and left legs 11L, 11R. At this time, the soles 13L, 13R of the golfer 20 are in surface-to-surface contact with the ground 30 for both right and left feet as shown in Fig. 2B.

**[0004]** When a swing begins, until it reaches a top swing through a backswing shown in Fig. 3, the right knee 12R faces slightly inwardly as in the address position with the body weight mainly resting on the inner side (that is, the side of the big toe 14R) of the right foot 11R.

**[0005]** Then, when a downswing begins, as shown in Fig. 4A, the left waist, which has turned to the right, returns to the left, the heel of the left foot 11L, which has been slightly raised, lands on the ground while stepping in, and at the same time, the shoulder turns, so that the left knee 12L, which has displaced rightwardly, will return to the original position, so that the body weight begins to move onto the left foot 11L.

[0006] As shown in Fig. 5A, in the flow from the impact of the ball to the completion of the swing, most of the body weight rests on the left foot 11L, so that bracing on the side of the little toe 15L is especially required.

[0007] But as in the case of a senior golfer, when the lower half of the body is not strong, since the support by the knees is weak, particularly in the flow from the top swing to the impact (in downswing), while the body weight moves onto the left foot 11L, as shown in Figs. 4B and 5B, bracing on the side of the little toe 15L of the left foot 11L does not work, so that the side of the big toe 14L tends to float above ground. This makes it impossible to perform a correct swing.

[0008] An object of this invention is make it possible for particularly senior golfers whose lower half body has weakened to perform a correct swing during a downswing with the foot on the bracing side (that is, left foot for a right-hander and right foot for a left-hander) stably in surface-to-surface contact with the ground.

#### SUMMARY OF THE INVENTION

[0009] According to this invention, there is provided golf shoes comprising a sealed bag provided at an area of a foot sole which becomes a fulcrum at a side for bracing during a period from a top swing to a completion of the swing, the sealed bag being arranged such that air can be injected thereinto and exhausted therefrom, whereby a portion corresponding to the area is raised by inflating the sealed bag by injecting air into it.

[0010] With this arrangement, when the golf shoes are put on with air injected into the sealed bag, during a downswing, since the portion of the fulcrum of the foot sole at a side for bracing rises by the

inflation of the sealed bag, even when the body weight moves, the golfer can stand firm on the foot on the side for bracing by the rise of the portion at the fulcrum. Thus it is possible to perform a correct swing. Specifically, the portion of the fulcrum refers to the area including and adjacent the little toe.

**[0011]** When the swing finishes, by exhausting air in the sealed bag, the sealed bag becomes flat, so that normal walking is possible.

**[0012]** If, as means of injecting and exhausting air, a hand pump and a release valve are provided, compared with one in which these means are separate from the shoe, there is no possibility of losing them. Thus it is more convenient.

**[0013]** If the hand pump and the release valve are buried in a tongue, when air is injected or released, one can operate the pump and the release valve by pressing them with e.g. the tip of the grip of a golf club while standing, so that he does not have to bend down.

**[0014]** Other features and objects of the present invention will become apparent from the following description made with reference to the accompanying drawings, in which:

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0015]** Fig. 1A is a schematic view of a golf shoe of this invention;

Fig. 1B is a side view of the same;

Fig. 2A shows a golfer in address position;

Fig. 2B shows the relation between the feet and the ground;

Fig. 3 shows a golfer in backswing;

Fig. 4A shows a golfer in downswing;

Figs. 4B and 4C show the relation between the feet and the ground when hitting with conventional shoes on and with the golf shoes of the present invention on, respectively;

Fig. 5A shows a golfer in impact; and

Figs. 5B and 5C show the relation between the feet and the ground when hitting with conventional shoes on and with the golf shoes of the present invention on, respectively.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

**[0016]** Hereinbelow, an embodiment of this invention is described with reference to the drawings.

Fig. 1A is a schematic view showing characterizing portions of a golf shoe 10 of this embodiment, and Fig. 1B is its side view.

**[0017]** As shown in these figures, a sealed bag 2 formed of a thin vinyl is fixed to the back of a midsole 1 kept in surface-to-surface contact with the sole of the shoe 10 at a portion corresponding to a region adjacent the little toe. The region adjacent the little toe is a portion which becomes a fulcrum for bracing when the body weight rests on the left foot during a downswing.

**[0018]** The sealed bag 2 is formed by superposing two thin vinyl plates 2a and bonding their perimeters together, and is adapted to inflate in the vertical direction (that is, thickness direction) as shown by a two-dot chain line in Fig. 1B when air is injected. One end of a vinyl tube 3 is connected to the sealed bag 2, and to the other end of the tube 3, a hand pump 4 for injecting air into the sealed bag 2 and a release valve 5 therefor are connected. The hand-push pump 4 and the release valve 5 are buried in a tongue 6.

**[0019]** When the shoe 10 is put on with the sealed bag 2 inflated by injecting air into it by means of the hand pump 4, the portion corresponding to the little toe will get raised.

**[0020]** When a driver is swung in this state, as shown in Figs. 4C and 5C, even when the body weight moves onto the side of the little toe 15L during downswing or at an impact, a raising of the portion of the little toe 15L due to inflation of the sealed bag 2 makes it possible to firmly stand on the left foot 11L (right foot 11R in the case of a left-hander). Thus, if other elements are complete, it is possible to perform a correct swing.

**[0021]** After the swing has finished, when air is released by operating the release valve 5 of the hand pump 4, the sealed bag 2 will reduce to the original thickness equal to the thickness of the two vinyl plates 2a forming it. Thus one can get the same feeling as when ordinary shoes are put on, and it will pose no problem whatsoever in traveling a course.

**[0022]** In this embodiment, since the hand pump 4 and the release valve 5 are provided at the portion of the tongue 6, one can inject air by pressing this portion with e.g. the tip of the grip of a golf club without stooping. Release of air, too, can be done in the same manner.

**[0023]** If one does not mind taking a stooping position, the position where the pump 4 and the release valve 5 are provided is not limited to the tongue 6, but they can be arranged at any portion of the shoe such as at the heel, side or instep.

**[0024]** Since the golf shoes of this invention are structured as described above, particularly for a golfer having a weakened lower body such as a senior golfer, by raising the area which becomes a fulcrum on the step-in foot side (adjacent the little toe) by inflating the sealed bag buried in the shoe, it is possible to stably set the step-in foot side. Thus it is possible to perform a correct swing from the top swing to completion.

## ABSTRACT OF THE DISCLOSURE

Golf shoes are proposed which make it possible for particularly senior golfers whose lower body has weakened to perform a correct swing during a downswing. A sealed bag formed of vinyl is fixed to a portion of a midsole in surface contact with the sole of a shoe. A hand pump and a release valve are connected to the sealed bag through a vinyl tube. When the shoes are put on with the sealed bag inflated by injecting air into it by operating the hand pump, the portion of the little toe rises. When a swing is performed in this state, even when the body weight moves at the time of a downswing or an impact, due to the rise of the portion of the little toe by inflation of the sealed bag, even a senior golfer can make a correct swing by standing firm on his left foot. When air is released from the sealed bag, normal walking is possible.